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NEOTYPIFICATION OF *SOLIDAGO BUCKLEYI* (ASTERACEAE: ASTEREAE) AND OBSERVATIONS ON ITS DISTRIBUTION

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ABSTRACT

A neotype specimen is designated here for *Solidago buckleyi* due to the lack of original material. The Buckley collection (*Buckley s.n.* NY ex Herb. LeRoy) from Alabama presumed to be the holotype is not the specimen seen by Torrey and A. Gray in the early 1840s. Therefore, *E.J. Palmer 31579* (NY) is designated as the neotype for the species name.

KEY WORDS: *Solidago buckleyi*, neotypification, multivariate morphometrics

Solidago buckleyi Torr. & A. Gray (1842) is a member of the subsect. *Thyrsiflorae* A. Gray and is similar to *S. petiolaris* Ait. (Semple & Cook 2006). Buckley's goldenrod is native to southern Missouri, southern Illinois, northwestern Kentucky, and extreme southwestern Indiana. In the protologue of *S. buckleyi*, a single collection was cited: "Interior of Alabama, *Mr. S.B. Buckley!* Oct." Nesom (1990) included a symbol for *S. buckleyi* from Jasper Co., Georgia, on his distribution map. There are problems with both the Alabama specimen and the Georgia specimen.

A putative collection of *Solidago buckleyi* from Jasper Co., Georgia, was seen in a loan from NY (Thiers, continuous update). The specimen (*Porter s.n.)* was labeled by Porter as *S. buckleyi* and annotated by Nesom as *S. buckleyi* in 1990. However, the collection is an unrecognized isotype of *Solidago porteri* Small and is not a specimen of *S. buckleyi.* Therefore, the report of *S. buckleyi* from Georgia is an error. A manuscript on the rediscovery of *S. porteri* is in preparation by J.C. Semple and D. Estes.

The presumed holotype of *Solidago buckleyi* consists of a few fragments (Fig. 1), which makes the identity uncertain. Posted on the New York Botanical Garden web site is a digital photograph of the specimen (*Buckley s.n.*), which shows a folded card in the open position to reveal the fragments of stem, leaves and inflorescence. However, the front face of the card contains critical information regarding the eligibility of this specimen to be the holotype of *S. buckleyi.* In handscript on the card are the following: "Solidago Buckleyi" and "Ala 1836 Buckley." At the top of the card is the printed label "New York Botanical Garden / Herbarium of Mr. P.V. LeRoy / Purchased 1896" (see Fig. 1). Since the location datum does not mention "Interior of Alabama" and since this particular specimen did not come into the possession of the NY Herbarium until 1896 and was not seen by Torrey and/or A. Gray, the specimen does not qualify to be the holotype of *S. buckleyi.* Therefore, we do not consider the NY specimen as part of the original material. Furthermore, it is also not certain to what species the NY ex LeRoy Herbarium specimen belongs due to the nature of the fragments. It may belong to *S. buckleyi*, but we cannot be certain. The fact that the two large

leaves have large teeth is not a trait exclusive to *S. buckleyi* sensu authors. Therefore, we exclude the NY specimen from consideration for any typification and opt for a neotypification.

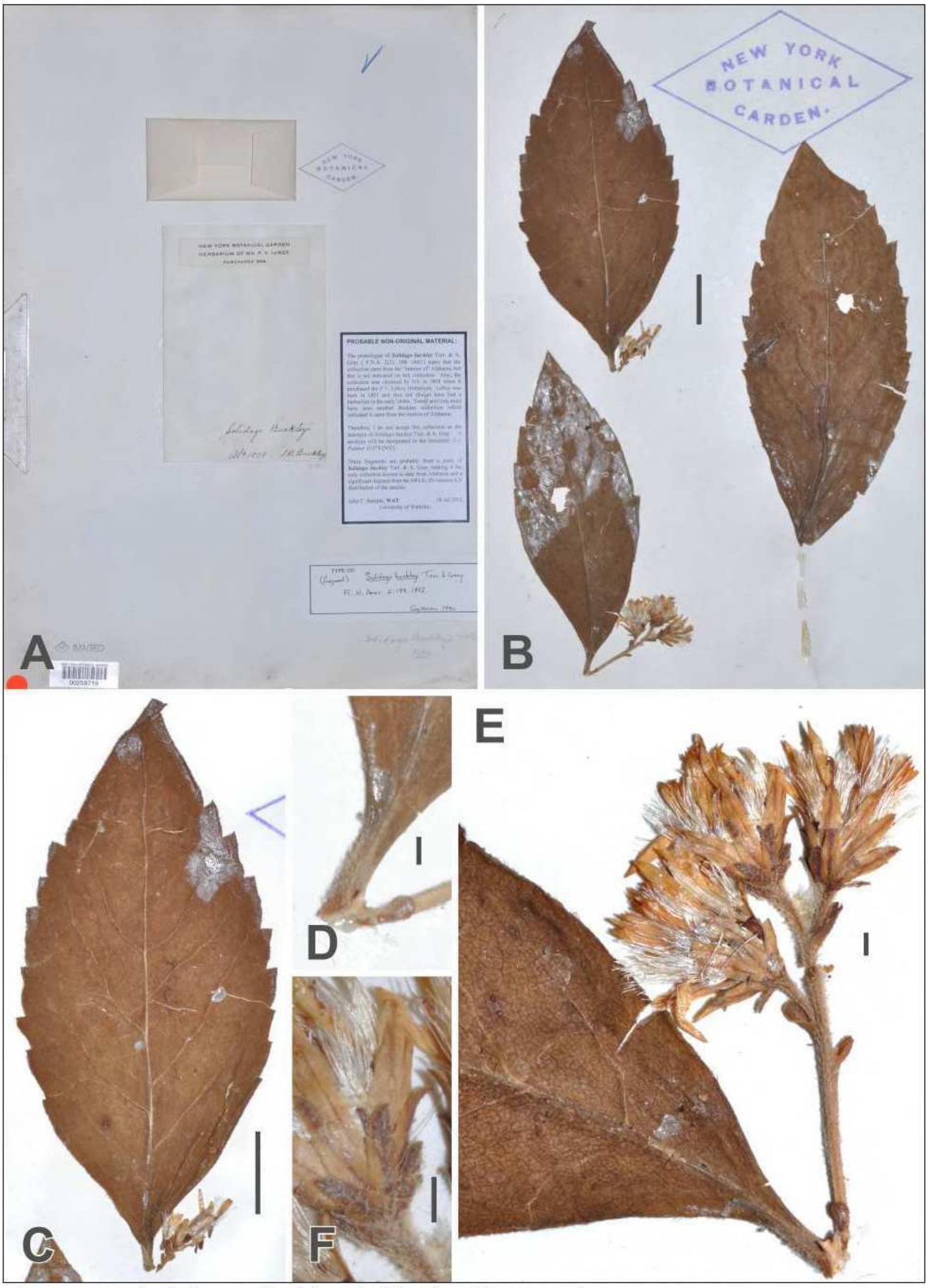

Figure 1. Putative holotype of *Solidago buckleyi* (*Buckley s.n.* NY). A. B. C. D.

A revised dot distribution of *Solidago buckleyi* has been prepared (Fig. 2). It includes all collections seen and additional literature reports that are likely to be correct. The location of *Buckley s.n.* (NY) is indicated with a question mark as the exact location is unknown.

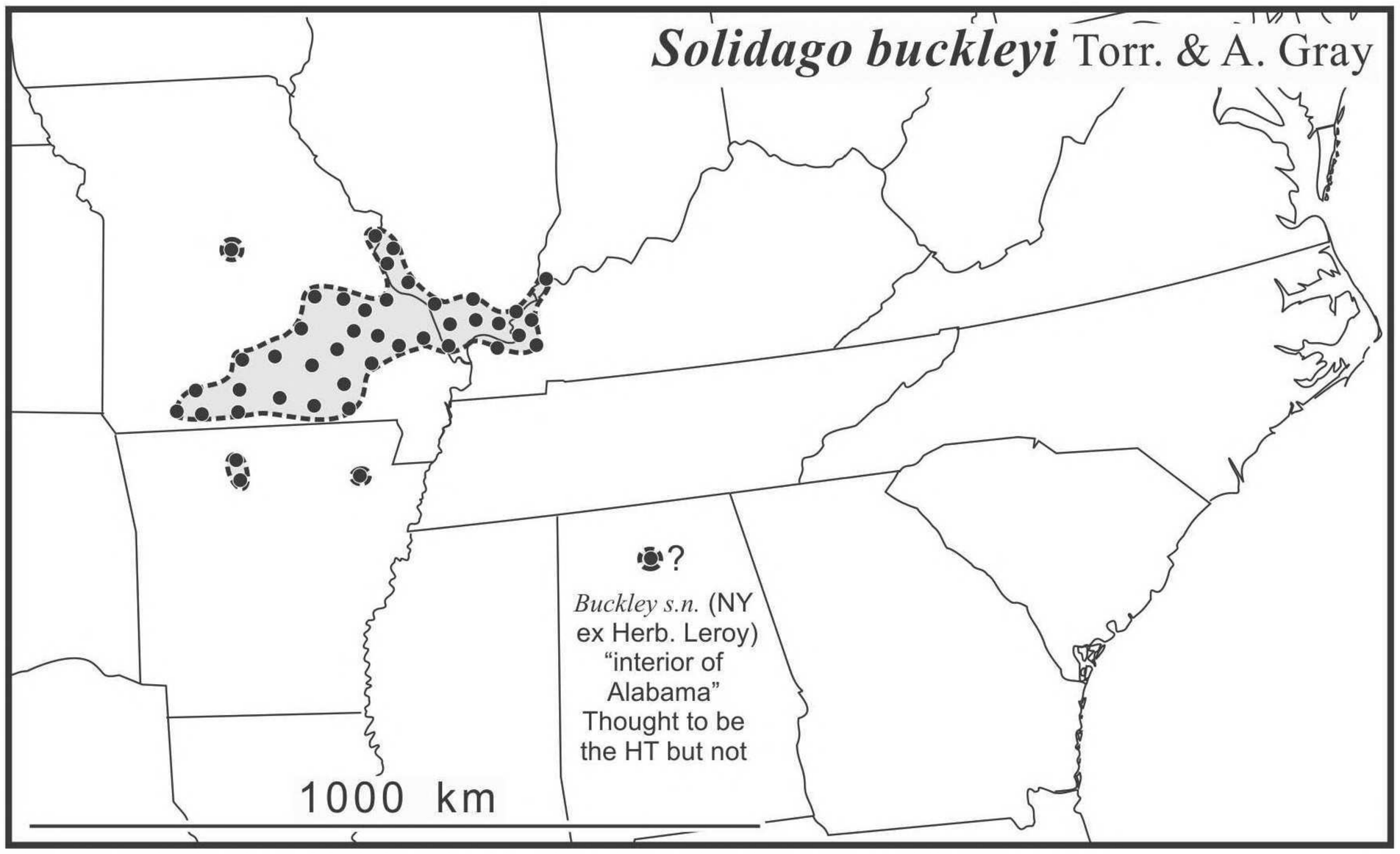

Figure 2. Distribution of *Solidago buckleyi* based on collections seen and literature

Neotypification

Solidago buckleyi Torr. & A. Gray, Fl. N. Amer. 2(2): 198. 1842. *Aster buckleyi* (Torr. & A. Gray) Kuntze. Revis. Gen. Pl. 1: 317. 1891. **TYPE**: **USA**. **Alabama**. "interior of," *Mr. S.B. Buckley s.n.*, not located. **NEOTYPE** (designated here): **USA. Missouri**. St. Francois Co.: thickets along small rock creek, near Bismarck, 6 Sep 1926, *E.J. Palmer 31579* (NY, Figs. 3 and 4).

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LITERATURE CITED

Nesom, G.L. 1990. Taxonomy of *Solidago petiolaris* (Astereae: Asteraceae) and related Mexican species. Phytologia 69: 445–456.

Semple, J.C. and R.E. Cook. 2006. *Solidago* Linnaeus. Pp. 107–166, *in* Flora North America Editorial Committee (eds.). Flora of North America. Vol. 20. Asteraceae, Part 2. Astereae and Senecioneae. Oxford Univ. Press, New York.

Torrey, J. and A. Gray. 1842. *Solidago*. Pp. 195–231, *in* Flora North America. Vol. 2. Wiley & Putnam, New York.

Figure 3. Neotype of *Solidago buckleyi* (*E.J. Palmer 31579* NY).

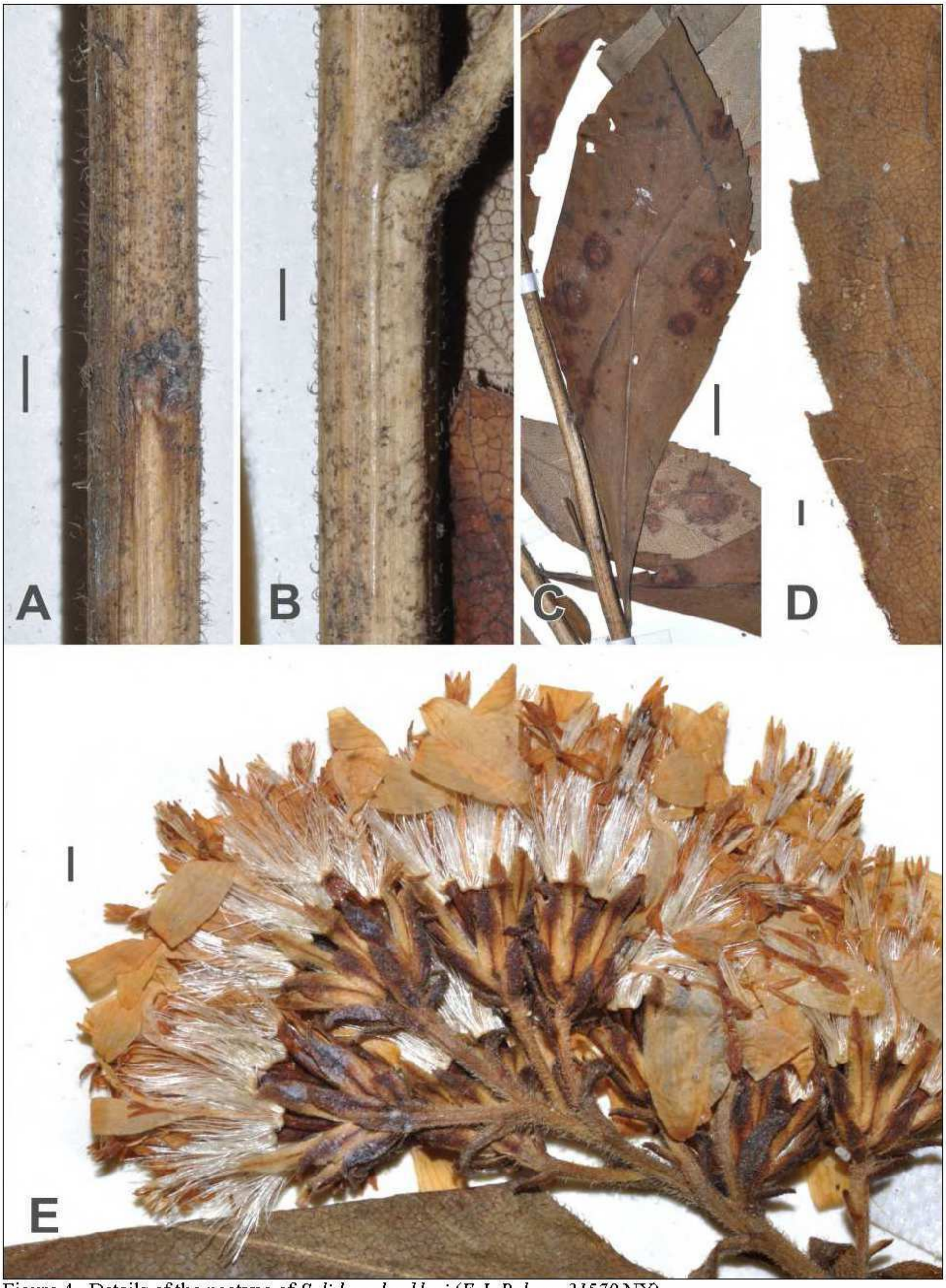

Figure 4. Details of the neotype of *Solidago buckleyi* (*E.J. Palmer 31579* NY).